

would be apparent, while remaining within the spirit and scope of the invention. In order to determine the metes and bounds of the invention, therefore, reference should be made to the appended claims.

We claim:

1. A network element, comprising:
at least one processor; and
at least one memory comprising computer program code, wherein the at least one memory and the computer program code configured, with the at least one processor, to cause the network element at least to
transmit at least one of:
calculated impact information for a cell of the network element when taking an action related to a cell of the network element and/or when taking an action related to a cell of a second network element; and
a request for taking the action related to the cell of the second network element.
2. The network element of claim 1, wherein the action comprises at least one of:
muting the transmission
changing the on-duration,
reducing the transmit power, or
beamforming the transmission.
3. The network element of claim 1, wherein the impact comprises benefit/penalty information.
4. The network element of claim 3, wherein the benefit/penalty information further comprises a list of elements, wherein each of the elements represents information about the benefit/penalty information relative to a set of resources.
5. The network element of claim 3, wherein the benefit/penalty information further comprises at least one of:
an amount of resources for the action;
an indication of specific frequency resources for the action;
an indication of specific frequency sub-band resource for the action;
an indication of beamforming coefficients;
an indication of specific time for the action; or
an indication of the duration for the action.
6. The network element of claim 1, wherein the at least one memory and the computer program code are further configured, with the at least one processor, to cause the network element at least to:
calculate a net benefit based on the calculated impact information; and
transmit the net benefit to the second network element.
7. A network element, comprising:
at least one processor; and
at least one memory comprising computer program code, wherein the at least one memory and the computer program code configured, with the at least one processor, to cause the network element at least to
receive at least one of:
impact information for a cell of a second network element when taking an action related to the cell of the second network element, and/or when taking an action related to a cell of the network element;
a request from the second network element for taking an action related to a cell of the network element; and
a command from a central network element for taking an action related to a cell of the network element; and

take the action related to the cell of the network element based at least on one of the received impact information, the command, or the request.

8. The network element of claim 7, wherein the at least one memory and the computer program code are further configured, with the at least one processor, to cause the network element at least to:

calculate a penalty/benefit for taking the action;
calculate a net benefit based on the received impact information and the calculated penalty/benefit information; and
determine whether to undertake the action based on the calculated net benefit.

9. The network element of claim 8, wherein the calculated net benefit is transmitted to at least one other network element.

10. The network element of claim 8, wherein the determining whether to undertake the action further comprises:

receiving net benefit information from at least one other network element; and
determining to undertake the action based a comparison of the calculated net benefit and the net benefit information received from the at least one other network element.

11. A centralized network element, comprising:

at least one processor; and
at least one memory comprising computer program code, wherein the at least one memory and the computer program code configured, with the at least one processor, to cause the centralized network element at least to
receive from a first network element at least one of:

impact information for a cell of the first network element when taking an action related to a cell of the first network element, or when taking an action related to a cell of a second network element, and
a request for taking an action related to the cell of the first network element or the cell of the second network element; and

transmit a command for taking the action related to the cell of the first network element or the cell of the second network element based on the received impact information and/or request.

12. The centralized network element of claim 11, wherein the impact information comprises at least one of benefit information, penalty information, or net benefit information.

13. A method, comprising:

transmitting, by a network element, at least one of:
calculated impact information for a cell of the network element when taking an action related to a cell of the network element and/or taking an action related to a cell of a second network element; and
a request for taking the action related to the cell of the second network element.

14. The method according to claim 13, wherein the action comprises at least one of:

muting the transmission
changing the on-duration,
reducing the transmit power, or
beamforming the transmission.

15. The method according to claim 13, wherein the impact comprises benefit/penalty information.

16. The method according claim 15, wherein the benefit/penalty information further comprises at least one of:

an amount of resources for the action;
an indication of specific frequency resources for the action;